

ABSTRACT OF THE DISCLOSURE

There are included a part for branching an input lightwave incident from an optical fiber or the like; a part (photoelectric conversion part) for converting a monitor lightwave, which is one of the branched input lightwaves, to an electric signal; and a part for opening/closing the lightwave transmission path of a signal lightwave in accordance with the electric signal. The light power of an output lightwave is adjusted by controlling the opening/closing amounts of the lightwave transmission path according to the quantity of the electric signal as outputted in accordance with the monitor lightwave. The photoelectric conversion part comprises a semiconductor photovoltaic element capable of performing a photoelectric conversion without using any external power supply. The part for opening/closing the lightwave transmission path comprises a photo-shutter using a micro-machine or comprises an optical element such as absorption type modulator, refraction modulator or the like.